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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,401	09/30/2005	Laurent Dumont	PLAS-027	9940

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JAMES C. LYDON
100 DAINGERFIELD ROAD
SUITE 100
ALEXANDRIA, VA 22314

EXAMINER

ZIMMER, MARC S

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1712

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,401	Applicant(s) DUMONT ET AL.	
	Examiner Marc S. Zimmer	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

Claim 4 should be amended to make clear the fact that PVA is an embodiment of the hydrocolloid. At first glance, it was not immediately clear that claim 4 was further limiting of claim 1.

Claims 10-14 are objected as they are very awkward in that they effectively recite a process of making a product made by a process. Claim 10 should be rewritten as a process claim independent of claim 1

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. At issue is the whether or not it had been Applicant's intention to stipulate that, where component (C) is other than a protective hydrocolloid, it is a silane or polysiloxane either of which necessarily contains both silanol moieties and salified amino groups. In the overall context of the full disclosure, it would appear that the silanes should also feature salified amino groups but this is not self-evident in light of the manner in which this aspect of the invention is disclosed by the claims.

Further, concerning claim 2, the Examiner cannot ascertain at all whether the vinylated cyclotrisiloxane mentioned therein is to be absent or present. On the one hand, the second line of the claim says that the emulsion is "devoid of" the materials

that follow. However, the claim later states that this material is present in specified amounts. Clarification is needed.

There is no antecedent basis in claim 1 for the limitations outlined in claim 6. Indeed, PVA is only mentioned for the first time in claim 4.

As for claim 13, it seems contradictory to say that, "*all or a part of a PVA (C) is used as the only emulsifier.*"

Claims 15 and 16 provides for the use of an emulsion, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 15 and 16 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Analysis

It is noted that the claims are written in a product-by-process format insofar as there are conditions placed on the invention and its preparation where component (C) corresponds to a protective hydrocolloid. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the

product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Applicant's Specification does not furnish any evidence that a patentably distinct product is obtained were the emulsion to not be formulated as two parts hence a reference that teaches an emulsion comprising the same ingredients, but wherein the catalyst is not emulsified separately of the base polymer, crosslinking agent, or both, will be considered to be anticipatory of, or at least render obvious the claims. (In *arguendo*, the Examiner takes notice of the fact that the isolation of the catalyst part from one or both of the aforementioned components is widely practiced to preclude premature reaction of these materials.) See, for instance, Huang et al., U.S. Patent # 6,319,982.

The term "salified" as interpreted by the Examiner is synonymous with "neutralized".

The term "architextural textile" is assigned the definition given it on page 24 because the Examiner has no notion of what other broader reasonable interpretation/definition might be assigned.

Claims 6 and 9 contain additional product-by-process language that need not necessarily be satisfied for the claims to be rendered unpatentable. For instance, claim 9 mentions the incorporation of a filler (J) that is introduced as a 10 to 60 wt. % dispersion. A reference need not describe the addition of the silica in this form however

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provided that the result is that the same amount of an equivalent filler is provided.

Applicant's stipulation that it is added as a 10 to 60 wt. % dispersion is, in essence, a process limitation.

Claims 12 and 14 both mention adding one or more components, "when the coating bath is formulated/prepared." For the purpose of evaluating these claims against the prior art, the aforementioned phrase will be taken to mean that the specified materials are added just before the composition is to be used. It should be emphasized, however, that insofar as an obvious embodiment of a coating process would be to assemble all components of the coating bath just prior to its use, the aforementioned phrase doesn't seem to be an especially novel feature.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-8, 10-11, 13, and 15-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fau et al., U.S. Patent # 4,971,029.

At the outset, it appears that Applicant had identified this reference as a possible obstacle to patentability insofar as claim 2 serves to exclude the employment of compounds that are essential components of the invention taught by the prior art disclosure, i.e. the vinylated cyclosiloxane and vinylated linear polysiloxane that, by virtue of the required presence of terminal- and pendant vinyl moieties, would necessarily contain more than 3 of these substituents.

Fau discloses a two-part emulsion for coating various substrates (column 6, lines 51-61) that, like that of the instant claims, comprises a catalytic and non-catalytic pre-emulsion. See column 2, line 57 through column 3, line 31. Polyvinyl alcohol is described not as an adhesion promoter but, rather, as a surfactant. Nevertheless, it will inherently fulfill both roles, a fact that seems to be tacitly acknowledged by instant claim 13 where an emulsion containing only PVA as both adhesion promoter and emulsifier is unmistakably contemplated. A commercial source of the PVA is a product having the trade name Rhodoviol ® (column 4, lines 32-39) and it is added in quantities corresponding to 1 to 20 parts per 100 parts of the base polymer component(s). Applicant's examples, likewise, mention Rhodoviol ® as a component of their invention hence it would appear that the limitations delineating the structure of the PVA taken in claim 6 are inherently satisfied.

Concerning claims 7 and 8, these claims further limit an element of the claimed invention that did not represent the Examiner's foundation for rejection. That is to say, the claims have been rejected over that embodiment where component (C) is a hydrocolloid. Claims 7 and 8 merely stipulate that, *where (C) is a salified organosilicon compound bearing amine groups*, it has a specific structure. These limitations have no impact whatsoever on the Examiner's rejection because the rejection is framed with Fau's utilization of PVA as the rationale for rejection.

Claims 1-2, and 4-16 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Duffy et al., U.S. Patent Application Publication No. 2003/0149166.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Duffy teaches a very similar invention comprising the materials mentioned in paragraphs 47-53 and in the amounts contemplated in paragraphs 55-59. Exemplary of component (A) according to paragraph 88 is a polydimethylsiloxane with dimethylvinyl silyl endgroups. Because this embodiment contains only a single vinyl group at each end, it does not run abreast of the excluded materials disclosed in claim 2 and, hence, claim 2 is satisfied. Exemplary permutations of the PVA component are described in

paragraphs 11-115 and include ones adhering to the limitations of claim 6. Paragraphs 185-188 are noteworthy because together they contemplate an emulsion derived from three pre-emulsions corresponding to those set forth in claim 12.

The rationale applied to claims 7 and 8 in the statement of rejection over *Gau* applies here also.

As for the vinyl group content limitation of claim 9, an alternative expression would be to say that there are between 2 and 100 equivalents for every 100,000 grams of polymer claim 9. The degree of polymerization of the vinylated polysiloxane according to paragraph 85 is 2 to 5,000. At about 1350 repeat units, the polymer weighs nearly 100,000 and the claim limitation is clearly satisfied because a polymer having only two vinyl groups is clearly contemplated. Of course, the vinyl group content would be higher, but still below 100 equivalents, for a fraction of the polymers having between 1 and 1350 repeat units. The water content limitation is satisfied by the emulsions outlined in the Examples.

Claims 1-2, 4-5, 7, and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Inoue et al., U.S. patent # 5,399,402. Inoue teaches a composition formulated for coating airbags comprising the materials outlined in the abstract and also a thickener of which polyvinyl alcohol is exemplary (column 5, lines 41-43). It is appreciated that Inoue is silent regarding the preparation of separate catalytic- and non-catalytic pre-emulsions but, again, Applicant has not shown that the inventions can be distinguished on these grounds and, in any

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case, the formation of separate emulsions where the catalyst is isolated from the base polymer, crosslinker, or both is obvious.

The amount of PVA added is only expressed in one embodiment in terms of a quantity necessary to bring about a particular viscosity increase. Other disclosures teaching comparable systems seem to indicate that the amount of PVA thickener needed to obtain similar viscosity increases corresponds to that which is recited in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fau et al., U.S. Patent # 4,971,029.

Concerning claim 3, it shall first be noted that Fau advocates using PVA in amounts similar to those mandated by Applicant's claims. It is further observed that Fau is coating similar target substrates and, thus, would ostensibly be coating in amounts per unit area that are similar to those amounts that are used by Applicant. In this connection, it would seem that claim 3 is obviously satisfied because Fau teaches a similar weight contribution of PVA to the overall makeup of the emulsion and, therefore, where similar amounts of emulsion are used to cover a specified area, the amounts of PVA will be inherently similar.

As for claim 9, Fau fails to mention that the organohydrogensiloxane component is introduced in that quantity that provides between 0.4 and 10 Si-H groups per alkenyl moiety contributed by the vinyl group-bearing compounds. Nevertheless, the Examiner takes notice of the fact that this is an obvious aspect in view of the facts that (i) the skilled artisan is absolutely capable of determining the appropriate amount of crosslinker to be added to tailor certain properties of the coating as a matter of routine experimentation, and (ii) virtually every disclosure the Examiner has ever encountered that has been directed to an addition-curable polysiloxane composition teaches a range nearly identical to the smaller range favored by Applicant. As for the vinyl group content limitation, an alternative expression would be to say that there are between 2 and 100 equivalents for every 100,000 grams of polymer. The viscosity range associated with (V1) of the patent is consistent with a polymer having anywhere between 1 and 1020 repeat units. A formula relating polymer viscosity and chain length is provided by *Silicones, An Introduction to Their Chemistry and Applications* authored by Freeman:

$$\log \eta = 0.1(n)^{0.5} + 1.1$$

where η is the viscosity and "n" corresponds to chain length. Keeping in mind the structure of the polymer where each repeat unit weights was 74.1, it is clear that Applicant's requirement would be satisfied were the result of the calculation to be extrapolated out to 100,000 g of polymer.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duffy et al., U.S. Patent Application Publication No. 2003/0149166. An analysis similar to that used in explaining the unpatentability of claim 3 over Fau also applies here.

Claims 10, 11, 13, and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al., U.S. patent # 5,399,402. To reiterate, providing the catalyst component separately of one or more of the reactive components of a crosslinking composition is known.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 29, 2007

A handwritten signature in black ink, appearing to read "Marc S. Zimmer". The signature is stylized with a large, looped "Z" and a prominent "M".

MARC S. ZIMMER
PRIMARY EXAMINER